



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,143	06/30/2003	Boris Ginzburg	P-5751-US	8189
27130	7590	05/20/2005	EXAMINER	
EITAN, PEARL, LATZER & COHEN ZEDEK LLP 10 ROCKEFELLER PLAZA, SUITE 1001 NEW YORK, NY 10020			FIGUEROA, MARISOL	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,143	GINZBURG ET AL.	
	Examiner	Art Unit	
	Marisol Figueroa	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/30/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to because of the following informalities: On page 7, line 25; "xemplary" should apparently be changed to -- exemplary--; on page 9, line1; "tim" should apparently be changed to -- timer --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 30** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Claim 30** recites the limitation "said transceiver" on lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

4. **Claims 25-29** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a transmitter in the apparatus to "transmit said one or more data packets during an awake mode". The Examiner notes that this is an essential element, which has to be present in the apparatus in order to operate as claimed, since the "buffer" does not accomplish this function.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2681

6. **Claim 29** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant doesn't describe in the specification the step wherein a "disabling unit" in an apparatus enables a "transmitter during a power save mode". In the Applicant's disclosure, page 6, lines 11-20, he discloses that "during a power save mode the transmitter may be disabled or shut off", it does not disclose enabling it during a "power save mode", without those additional details one of ordinary skill in the art would have been burdened by undue experimentation to make or use the claimed invention. The Examiner interprets by the limitation of claim 29 that the apparatus enables its transmitter to start an awake mode (Applicant's disclosure: page 6, lines 11-20). The claim will be treated in this context.

Claim Objections

7. **Claim 35** is objected to because of the following informalities: the claim cannot depend on itself; the claim should apparently be corrected to depend on claim 34. Appropriate correction is required.

8. **Claim 39** is objected to because of the following informalities: in line 2, "wave" should apparently read as -- save --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2681

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. **Claims 1-3, 5-6, 10-11, 13-15, 17-18, and 22-23** are rejected under 35 U.S.C. 102(e) as being anticipated by **Larsson et al. U.S. Patent 6,463,307**.

Regarding claim 1, Larsson discloses a method comprising: transmitting during an awake mode one or more data packets sent for transmission during a power save mode (col.4, lines 48-66).

Regarding claim 2, Larsson discloses the method of claim 1, further comprising buffering said one or more data packets during said power save mode (col.4, lines 61-63).

Regarding claim 3, Larsson discloses the method of claim 2, wherein transmitting during an awake mode comprises transmitting said one or more packets in response to a wake-up trigger (col.4, lines 48-61; the BS begins transmission of the data packets after transmitting a paging message that awakens the mobile terminal and which the mobile terminal acknowledges).

Regarding claim 5, Larsson discloses the method of claim 3, wherein said wake-up trigger relates to an aggregate size of the one or more data packets (col.6, lines 27-33; the base station determines how often the mobile terminal should check for paging messages based on traffic contract of established connections, experienced traffic load, etc.).

Regarding claim 6, Larsson discloses the method of claim 3, wherein said wake-up trigger relates to a period of time during which no data packets are sent for transmission (col.4, lines 48-57; the mobile terminal awakens from a power-saving sleep or hibernation state for a period of time in where the terminal has no data to receive or transmit).

Regarding claim 10, Larsson discloses the method of claim 1, wherein transmitting during an awake mode comprises transmitting an awake mode signal to indicate a start of said awake mode (col.4, lines 48-61).

Regarding claim 11, Larsson discloses the method of claim 1, wherein transmitting during an awake mode comprises transmitting a power save signal to indicate an end of said awake mode (col.5, lines 4-10).

Regarding claim 13, Larsson discloses a program storage device having instructions readable by a machine that when executed by the machine result in: transmitting during an awake mode one or more data packets sent for transmission during a power save mode (col.4, lines 48-66). Note that Larsson inherently has a program storage device having instructions readable by a machine given that it shows a process; the process would be implemented by a processor that requires a "program storage device", e.g., a RAM, to function.

Regarding claim 14, the claim is rejected over the same reasons stated about claim 2, as it recites the same limitations as claim 2. See remarks about claim 2 above.

Regarding claim 15, the claim is rejected over the same reasons stated about claim 3, as it recites the same limitations as claim 3. See remarks about claim 3 above.

Regarding claim 17, the claim is rejected over the same reasons stated about claim 5, as it recites the same limitations as claim 5. See remarks about claim 5 above.

Regarding claim 18, the claim is rejected over the same reasons stated about claim 6, as it recites the same limitations as claim 6. See remarks about claim 6 above.

Regarding claim 22, the claim is rejected over the same reasons stated about claim 10, as it recites the same limitations as claim 10. See remarks about claim 10 above.

Regarding claim 23, the claim is rejected over the same reasons stated about claim 11, as it recites the same limitations as claim 11. See remarks about claim 11 above.

11. **Claims 25-29** are rejected under 35 U.S.C. 102(e) as being anticipated by **Beach et al. U.S. Publication No. 2004/0072588**.

Regarding claim 25, Beach discloses an apparatus comprising a buffer to store one or more data packets during a power save mode and to transmit said one or more data packets during an awake mode (P.0005, lines 13-29; P.0006, lines 1-7).

Regarding claim 26, Beach discloses the apparatus of claim 25, further comprising a processor adapted to transmit an awake signal to indicate a start of said awake mode (P.0026, lines 8-16).

Regarding claim 27, Beach discloses the apparatus of claim 26, wherein said processor is further adapted to transmit a power save signal to indicate an end of said awake mode (P.0006, lines 7-10; P.0007, lines 13-18; P.0008, lines 1-4, 13-14; P.0026, lines 8-23; the mobile unit processor cause the transmitter to transmit a polling signal to the access point indicating a selected period of audio information, in which the processor power down the transmitter and cause the mobile unit to work in power saving mode).

Regarding claim 28, Beach discloses the apparatus of claim 27, comprising a disabling unit to disable said transmitter during said power save mode (P.0007, lines 13-18).

Regarding claim 29, Beach discloses the apparatus of claim 28, wherein said disabling unit is able to enable said transmitter during said power save mode (P.0022, lines 3-6; P.0026, lines 2-16, the mobile unit in the power save mode has its transmitter/receiver inactive and activates its transceiver to sent a signal indicating to the access point that the mobile unit is no longer in power saving mode and also transmit accumulated data in its buffer).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 7-9, and 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Larsson et al.** in view of **Beach U.S. Publication No. 2003/0086443**.

Regarding claim 7, Larsson discloses the method of claim 2, but fails to disclose wherein buffering comprises buffering one or more of said data packets based on a priority criterion. Beach discloses a similar method to Larsson for power saving in wireless LANs, in where access points buffer packets directed to mobile units in power save mode (P.0017, lines 13-19) and establish a criterion for transmission of packets (P.0019). The access points divides traffic addressed to the stations in two categories, data that which must be sent immediately and data that which can be held until asked for by the mobile unit. If the access points determine that the data pertains to the second category the data is treated as power saving mode PSM packets and are buffered. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to buffer data packets according to a priority criterion to determine which packets may be buffered in order to save power to mobile units maintaining off their receivers.

Regarding claim 8, the combination of Larsson and Beach discloses the method of claim 7, wherein transmitting comprising transmitting said one or more data packets based on said priority criterion. Beach discloses a similar method to Larsson for power saving in

Art Unit: 2681

wireless LANs, in where access points buffer packets directed to mobile units in power save mode (P.0017, lines 13-19) and establish a criterion for transmission of packets (P.0019). The access points divides traffic addressed to the stations in two categories, data that which must be sent immediately and data that which can be held until asked for by the mobile unit. Data is sent immediately if it falls within the first category. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to transmit data based on a priority criterion because mobile units require information, which needs to be transmitted by the access points immediately, e.g. voice packets.

Regarding claim 9, the combination of Larsson and Beach discloses the method of claim 8, wherein said priority criterion relates to the priority of said one or more data packets. Beach discloses a similar method to Larsson for power saving in wireless LANs, in where access points buffer packets directed to mobile units in power save mode (P.0017, lines 13-19) and establish a criterion for transmission of packets (P.0019). The access points divides traffic addressed to the stations in two categories, data that which must be sent immediately and data that which can be held until asked for by the mobile unit. Data is sent immediately if it falls within the first category. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to establish a priority criterion related to the data packets, because data packets determines the transmission category, e.g. data that which must be immediately sent and data that can be buffer.

Regarding claim 19, the claim is rejected over the same reasons stated about claim 7, as it recites the same limitations as claim 7. See remarks about claim 7 above.

Regarding claim 20, the claim is rejected over the same reasons stated about claim 8, as it recites the same limitations as claim 8. See remarks about claim 8 above.

Regarding claim 21, the claim is rejected over the same reasons stated about claim 9, as it recites the same limitations as claim 8. See remarks about claim 9 above.

14. **Claims 4 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Larsson et al.** in view of **Liu et al. U.S. Publication No. 2004/0190467**.

Regarding claim 4, Larsson discloses the method of claim 3, however fails to disclose wherein said wake-up trigger relates to an aggregate anticipated transmission time of the one or more data packets. Liu discloses a power saving mechanism to schedule wake-up time of the stations based on data priorities, data length, and data rates (see abstract for example). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to relate a wake-up trigger of a wireless device according to the transmission time of the data packets in order to minimize the time the station must remain awake to reduce power consumption of the mobile terminal.

Regarding claim 16, the claim is rejected over the same reasons stated about claim 4, as it recites the same limitations as claim 4. See remarks about claim 4 above.

15. **Claims 12 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Larsson et al.** in view of **Beach et al. U.S. Publication No. 2004/0072588**.

Regarding claim 12, Larsson discloses the method of claim 1, but fails to disclose disabling a transmitter during said power save mode. Beach et al. discloses a method in which mobile unit powers down its receiver and transmitter in a power save mode (P.0005, lines 13-18). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention, to disable a transmitter during said power save mode to conserve battery power.

Regarding claim 24, the claim is rejected over the same reasons stated about claim 12, as it recites the same limitations as claim 12. See remarks about claim 12 above.

Art Unit: 2681

16. **Claims 30-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Beach et al. U.S. Publication No.2004/0072588**.

Regarding claim 30, Beach et al. discloses a wireless communication device (P.0007, lines 1-4) comprising: a buffer to store one or more data packets during a power save mode (P.0006, lines 10-12, 24-25); a transmitter adapted to transmit said at least one data packet during an awake mode (P.0007, lines 8-9; P.0023, lines 10-16). Beach fails to disclose an omni-directional antenna operationally coupled to said transceiver. A wireless communication device inherently includes an antenna coupled to a transceiver to receive and transmit signals from/to a base station. At the time of the invention, it would have been obvious matter of design choice to a person of ordinary skill in the art to couple an omni-directional antenna to the transceiver because Applicant has not disclosed that an omni-directional antenna provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with any known type of antenna (as admitted by Applicant in his specification (page 4, lines 22-26) omnidirectional antenna are known in the art).

Regarding claim 31, Beach et al. discloses the wireless communication device of claim 30, further comprising a processor to produce said one or more data packets (P.0009, lines 12-17).

Regarding claim 32, Beach et al. discloses the wireless communication device of claim 31, wherein said transmitter is further adapted to transmit an awake mode signal to indicate a start of said awake mode (P.0007, lines 8-9; P.0026, lines 9-16).

Regarding claim 33, Beach et al. discloses the wireless communication device of claim 31, wherein said transmitter is further adapted to transmit a power save mode signal to indicate an end of said awake mode (P.0007, lines 8-9; P.0026, lines 20-23).

Regarding claim 34, Beach et al. discloses the wireless communication device of claim 31, further comprising a power source (P.0004, lines 1-3; wireless communication devices are battery powered) and circuitry to connect said transmitter to said power source during said awake mode (P.0007, lines 13-18). Although Beach doesn't explicitly disclose that has circuitry to connect the power source to the transmitter during an awake mode. He discloses that a processor controls the operation of the transmitter and receiver and periodically power down the transmitter and receiver for selected time intervals and activates the transmitter when it needs to transmit a data packet (P.0022, lines 1-6), the processor is the logic circuitry that controls the operations of the TX/RX. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that the processor is the connection between the power source and the TX/RX and has the function to power down and power-up the TX/RX at the right periods of time to conserve power.

Regarding claim 35, Beach discloses the wireless communication device of claim 34, further comprising circuitry to disconnect said transmitter from said power source during a power save mode (P.0007, lines 13-18).

Regarding claim 36, Beach et al. discloses a wireless communication system comprising: a first wireless device adapted to transmit during an awake mode one or more data packets sent for transmission during a power save mode (P.0005, lines 6-29; P.0007; P.0009, lines 1-17; P.0026, lines 8-23, the mobile units receive audio data packets at a period corresponding to the selected period of audio information, e.g. power saving mode, and during that period the mobile unit processor prepares the audio information for transmission to the access point). Beach et al. fails to disclose a second wireless device adapted to receive said one or more data packets. It is well known in the art that when there is no direct path of

Art Unit: 2681

transmission from one mobile unit to another; the communication is made through the access point of the communication network. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to transmit data during an awake mode to a second wireless device, because during an awake mode a wireless device establishes a communication session with the access points.

Regarding claim 37, Beach et al. discloses the wireless communication system of claim 36, wherein said second wireless device is further adapted to transmit during said awake mode one or more data packets sent for transmission during said power save mode (P.0005, lines 6-29; P.0007; P.0009, lines 1-17; P.0026, lines 8-23; the mobile units receive audio data packets at a period corresponding to the selected period of audio information, e.g. power saving mode, and during that period the mobile unit processor prepares the audio information for transmission to the access point).

Regarding claim 38, Beach et al. discloses the wireless communication system of claim 37, wherein said first wireless device is further adapted to transmit an awake mode signal to indicate a start of said awake mode (P.0006, lines 1-7; P.0026, lines 9-16).

Regarding claim 39, Beach et al. discloses the wireless communication system of claim 38, wherein said first wireless device is further adapted to transmit a power save mode signal to indicate an end of said awake mode (P.0006, lines 7-10; P.0026, lines 20-23).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday thru Friday from 8:30 to 5:00.

Art Unit: 2681

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise, can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marisol Figueroa


EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER